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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 09/740,460

Filing Date: December 18, 2000

Appellant(s): COPELAND ET AL.

\_\_\_\_\_  
Kevin L. Daffer (Reg. No. 34,146)  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 08/23/2006 and 01/31/2007 appealing from the Office action mailed 09/02/2004.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The following is a related application shares a common specification with the application and is also under appeal:

09/740,531 Appeal Brief filed March 21, 2005

No other appeals or interferences are known which would directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal:

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

No amendment after final has been filed.

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

6,598,048	Carneal	7-2003
6,643,652	Helgeson	11-2003

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3,5-15, and 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carneal et al. (6,598,048) (hereinafter Carneal) in view of Helgeson et al. (6,643,652) (hereinafter Helgeson).

3. As per claim 1, Carneal discloses a software system supporting distributed web applications (see abstract), comprising:

a parent server page (e.g. col lines 64-67), containing a call to a child server page (e.g. col 1, lines 58-67 and col 2, lines 1-3, an inline object is child page);

a cache within a proxy server (e.g. col 7, lines 63-65), containing code for the parent server page (e.g. col 8, lines 7-10) and child server page (e.g. col 8, lines 7-10, an inline object is child page), wherein the code for the parent server page does not contain all the code for the child server page (fig 7, e.g. col 8, lines 7-44); and

a link associated (fig 7, e.g. col 8, lines 7-15, link is a reference to an inline object) with the call to the child server page (fig 7, e.g. col 8, lines 7-15), and encapsulating (e.g. col 8, lines 7-15, encapsulation is the process of combining elements to create a new entity) information for locating and executing the code for the child server page (fig 7, e.g. col 8, lines 7-15).

Carneal fails to disclose a cache within a web server. However, it is well known in the art, caching reduces network load because the data does

not have to be fetched across the network more than once unless the data is changed. Caching reduces the time required to read and write data.

Implementing external or internal caching to the web server is matter of a design preference. Web Application server can be implemented with both internal or external cache to the web server to achieve better performance.

Web application server with an internal cache can also push data to external caches and invalidate them when needed for security reason. Helgeson does explicitly disclose a cache within a web server (col 63,lines 65-67).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Carneal's teaching by using Helgeson's teaching because Helgeson uses control over caching in web content server would provide Carneal's system with control over caching in a web server and that will reduces the time required to read and write data in a web server (col 63, lines 59-61).

4. As per claim 2, Carneal discloses the child server page may be executed using the link, without executing the parent server page (fig 7, e.g. col 8, lines 7-15, link is a reference to an inline object).

5. As per claim 3, Carneal discloses link further comprises a web page address (e.g. col 1, lines 39-57) and a list of request attributes (e.g. col 8, lines 43-49).

6. As per claim 5, Carneal discloses an instruction sequence that may be invoked to locate the child server page in the cache (e.g. col 6, lines 35-44).

7. As per claims 9, 17, and 18, Carneal discloses a method for caching a parent and a child server page (see abstract), comprising:

storing code for the parent server page in a cache (e.g. col 6, lines 9 – 35, homepage is a parent page) located internal to a web server, such that the code for the parent server page does not contain all lines of code for the child server page (e.g. col 6, lines 36-44);

storing only one copy (e.g. col 6, lines 36-44, an inline object is a child page) of the code for the child server page in the cache (e.g. col 6, lines 36-44);

creating in the code (e.g. col 1, lines 58-67) for the parent server page a link to the singular copy of the code for the child server page (e.g. col 1, lines 58-67, link is an external reference and an inline object is a child page) for locating and executing the code for the child server page (e.g. col 2, lines 24-40); and

associating the link with more than one call to the child server page

(fig 7, e.g. col 8, lines 7-15, link is a reference to an inline object) to execute from the cache a plurality of the singular copy of the code for the child server page (col 6, lines 14-45).

8. As per claim 6, Carneal is silent about the object-oriented software system.

However, Helgeson discloses object-oriented software system (e.g. col 5, lines 13-15).

Therefore, it would have been obvious to one of ordinary skill in the art at the time invention was made to combine Carneal with Helgeson because it would provide pre-fetching child objects referenced by the parent object in the cache maintained by the proxy or web server, child objects can be sent to the browser without waiting.

9. As per claims 7 and 10, Carneal is silent about the server page comprises a Java Server Page (JSP).

However, Helgeson discloses the server page comprises a Java Server Page (JSP) (e.g. col 51, lines 20-30).

Therefore, it would have been obvious to one of ordinary skill in the art at the time invention was made to combine Carneal with Helgeson because it would provide pre-fetching child objects referenced by the parent object in

the cache maintained by the proxy or web server, child objects can be sent to the browser without waiting.

10. As per claim 8, Carneal discloses the child (e.g. col 8, lines 7-10, an inline object is child page), in response to a request made to the web server (fig 6) by a client or another web server (e.g. fig 6, col 12, lines 22-29).

Carneal is silent about using JSP (java server pages) technology.

However, Helgeson discloses JSP technology to create web pages (e.g. col 51, lines 20-30).

Therefore, it would have been obvious to one of ordinary skill in the art at the time invention was made to combine Carneal with Helgeson because it would provide pre-fetching child objects referenced by the parent object in the cache maintained by the proxy or web server, child objects can be sent to the browser without waiting.

11. As per claim 11, Carneal discloses invoking an instruction sequence to locate the code for the child page in the cache (e.g. col 6, lines 35-44), in response to a request made by a web browser (e.g. col 12, lines 22-42).

Carneal is silent about using JSP (java server pages) technology to create web pages.

However, Helgeson discloses the JSP (java server pages) technology to create web pages (e.g. col 51, lines 20-30).

Therefore, it would have been obvious to one of ordinary skill in the art at the time invention was made to combine Carneal with Helgeson because it would provide pre-fetching child objects referenced by the parent object in the cache maintained by the proxy or web server, child objects can be sent to the browser without waiting.

12. As per claim 12, Carneal discloses executing the code for the child page using the link, without executing all the code for the parent page (e.g. fig 7, col 8, lines 7-15).

Carneal is silent about using the JSP (java server pages) technology to create web pages.

However, Helgeson discloses the JSP (java server pages) technology to create web pages (e.g. col 51, lines 20-30).

Therefore, it would have been obvious to one of ordinary skill in the art at the time invention was made to combine Carneal with Helgeson because it would provide pre-fetching child objects referenced by the parent object in the cache maintained by the proxy or web server, child objects can be sent to the browser without waiting.

13. As per claim 13, Carneal discloses the child page is executed in the web server in response to a request made by a client (e.g. col 12, lines 22-45) or another web server (e.g. fig 6).

Carneal is silent about the JSP (java server pages) technology to create web pages.

However, Helgeson discloses the JSP (java server pages) technology to create web pages (e.g. col 51, lines 20-30).

Therefore, it would have been obvious to one of ordinary skill in the art at the time invention was made to combine Carneal with Helgeson because it would provide pre-fetching child objects referenced by the parent object in the cache maintained by the proxy or web server, child objects can be sent to the browser without waiting.

14. As per claim 14, Carneal discloses the child page is executed only if it cannot first be located in the cache (e.g. fig 7, col 8, lines 30-60).

Carneal is silent about the JSP (java server pages) technology to create web pages.

However, Helgeson the JSP (java server pages) technology to create web pages (e.g. col 51, lines 20-30).

Therefore, it would have been obvious to one of ordinary skill in the art at the time invention was made to combine Carneal with Helgeson because it

would provide pre-fetching child objects referenced by the parent object in the cache maintained by the proxy or web server, child objects can be sent to the browser without waiting.

15. As per claim 15, Carneal fails to disclose the cached child page may be updated without also updating the parent page.

However, Helgeson discloses the cached child page may be updated without also updating the parent page (e.g. col 63, lines 59-67).

Therefore, it would have been obvious to one of ordinary skill in the art at the time invention was made to combine Carneal with Helgeson because it would provide pre-fetching child objects referenced by the parent object in the cache maintained by the proxy or web server, child objects can be sent to the browser without waiting.

#### **(10) Response to Argument**

In general it should be noted that, Appellant's representative claim 1 is directed to a structure or an apparatus. The system comprises a parent server page, a cache and a link. However, out of three elements, only the cache is a structure. It has been held while features of an apparatus may be recited either structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function alone MPEP 2114; In re Swineheart, 169 USPQ 226; In re

Schreiber, 44 USPQ2d 1429 (Fed. Cir. 1997). Therefore, in order to read on Claim 1 the examiner is only required to show a prior art teaching of a cache within a web server.

Carneal teaches a cache in a web server (proxy server, 66, fig 5, Col. 6, line 17-22), containing code (the proxy server can determine that the document contains an external reference to an inline object, Col 6, lines 40-44) for the parent server page (col 6, lines 36-44, parent file, for example the Wall Street Journal home page, col 6, lines 30-31) and child server page (e.g. col 6, lines 36-44, an inline object or child server page), wherein the code for the parent server page does not contain all the code for the child server page (col 6, lines 31-44, the proxy server can determine that the document contains an external reference to an inline object, one of ordinary skill in the art would consider that the inline or child server page is not contained in the parent document e.g. WSJ, otherwise there would be no need to retrieve it ). Appellant own admission (page 10, lines 22-25 of appeal brief) Helgeson teaches caching within a server.

## 1. Definitions of Proxy Server and Web Server

Proxy Server:

A common proxy application is a caching web proxy. This provides a nearby cache of web pages and files available on remote web servers, allowing local network clients to access them more efficiently, quickly or reliably.

When it receives a request for a web resource (specified by a URL), a caching proxy looks for the resulting URL in its local cache. If found, it returns the document immediately. Otherwise it fetches it from the remote server, returns it to the requester and saves a copy in the cache.

([http://en.wikipedia.org/wiki/Proxy\\_server](http://en.wikipedia.org/wiki/Proxy_server)).

**Web Server:** Server software that uses HTTP to serve up HTML documents and any associated files and scripts when requested by a client, such as a Web browser. (Microsoft Dictionary).

2. It is obvious to combine the functionality of Web Server and Proxy Server (In re Wolfe "make integral").

3. Proof: Appellant own admission (page 10, lines 22-25 of appeal brief)  
Helgeson teaches caching within a server.

**Appellant's Argument:** Carneal fails to provide teaching or suggestion for a software system including a cache located with in a Web Server and containing code for a parent server page ad a child server page.

**Examiner's Response:** Carneal teaches a cache in a web server (proxy server, 66, fig 5, Col. 6, line 17-22), containing code (the proxy server can

determine that the document contains an external reference to an inline object, Col 6, lines 40-44) for the parent server page (col 6, lines 36-44, parent file, for example proxy server caches the Wall Street Journal home page the parent file, col 6, lines 30-31) and child server page (e.g. col 6, lines 36-44, proxy server caches and parses the originally parent file and further prefetches inline object or child server page before the actual request arrives from the browser, therefore, reference expressly teaches caching home page in centrally located local cache within a proxy server, and also prefetching/caching inline object or child server page to the cache in proxy server ). Appellant own admission (page 10, lines 22-25 of appeal brief) Helgeson teaches caching within a server. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Carneal's teaching by using Helgeson's teaching because Helgeson uses control over caching in web content server would provide Carneal's system with control over caching in a web server and that will reduces the time required to read and write data in a web server (motivation can be found in Carneal, Col 6, lines 8-53).

**Appellant's Argument:** Carneal does not teach or suggest that the parent file may also be stored along with the inline objects in the same cache.

**Examiner's Response:** Carneal teaches the parent file (col 6, lines 36-44, parent file, for example the Wall Street Journal home page, col 6, lines 30-31) may also be stored along with the inline objects (e.g. col 6, lines 36-44, an inline object or child server page) in the cache (Col 6, lines 9-35; Col 3, lines 9-35, proxy server caches and parses the originally parent file for example the Wall Street Journal home page and further prefetches inline object or child server page before the actual request arrives from the browser, therefore, reference expressly teaches caching home page in centrally located local cache within a proxy server, and also prefetching/caching inline object or child server page to the cache in proxy server).

It is noted that the features upon which applicant relies (i.e., the parent file may also be stored along with the inline objects in the **same cache**) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

**Appellant's Argument:** The teaching of Carneal cannot be modified or combined with those of Helgeson to provide the claimed software system for caching server pages in a web server.

**Examiner's Response:** In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Carneal teaches a cache in a web server (proxy server, 66, fig 5, Col. 6, line 17-22), containing code (the proxy server can determine that the document contains an external reference to an inline object, Col 6, lines 40-44) for the parent server page (col 6, lines 36-44, parent file, for example the Wall Street Journal home page, col 6, lines 30-31) and child server page (col 6, lines 36-44, Col 3, lines 9-35, proxy server caches and parses the originally parent file for example the Wall Street Journal home page and further prefetches inline object or child server page before the actual request arrives from the browser, therefore, reference expressly teaches caching home page in centrally located local cache within a proxy server, and also prefetching/caching inline object or child server page to the cache in proxy server). Appellant own admission (page 10, lines 22-25 of appeal brief) Helgeson teaches caching within a server. Therefore,

it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Carneal's teaching by using Helgeson's teaching because Helgeson uses control over caching in web content server would provide Carneal's system with control over caching in a web server and that will reduces the time required to read and write data in a web server (motivation can be found in Carneal, Col 6, lines 8-53).

**Appellant's Argument:** Carneal and Helgeson each fail to provide teaching, suggestion or motivation for a computer program product, web server or method for caching a parent and child server page, where the method includes storing only one copy of the code for the child server page in a cache located within a web server.

**Examiner's Response:** In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Carneal teaches storing only one copy of the code for

the child server page in a cache located within a web server (the proxy server can determine that the document contains an external reference to an inline object, Col 6, lines 40-44, parent file, for example the Wall Street Journal home page, col 6, lines 30-31; Col 3, lines 9-35, proxy server caches and parses the originally parent file for example the Wall Street Journal home page and further prefetches inline object or child server page before the actual request arrives from the browser, therefore, reference expressly teaches caching home page in centrally located local cache within a proxy server, and also prefetching/caching inline object or child server page to the cache in proxy server). Appellant own admission (page 10, lines 22-25 of appeal brief) Helgeson teaches caching within a server. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Carneal's teaching by using Helgeson's teaching because Helgeson uses control over caching in web content server would provide Carneal's system with control over caching in a web server and that will reduces the time required to read and write data in a web server (motivation can be found in Carneal, Col 6, lines 8-53).

For all these reasons, claims 1-3, 5-15, 17 and 18 are properly rejected under USC 103 (a) as anticipated by Carneal in view of Helgeson.

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the  
examiner in the Related Appeals and Interferences section of ~~THIS EXAMINER'S~~ <sup>NATHAN J. FLYNN</sup>  
~~TECHNOLOGY CENTER 2100~~ <sup>SUPERVISORY PATENT EXAMINER</sup>  
answer.

For the above reasons, it is believed that the rejections should be  
sustained.

Respectfully submitted

MAS

  
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